

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 17-21, and 23-26 and 28-50 remain pending. Claims 22 and 27 have been canceled. New claims 51-56 have been added. Claims 1-16 were previously canceled.

By the foregoing amendment to the specification, minor modifications have been proposed to address translational errors which occurred in the original filed application. For example, the term "disconnecter" has been changed to the more accurately translated phrase "disconnecting breaker" on page 1. The term "high tension" has been changed to the more accurate phrase "high voltage". The brief description of the figures has been changed to refer to reference numerals already existent in the originally filed drawings and discussed in the originally filed specification. No new matter has been added by these minor amendments to the specification. A substitute specification including all of the proposed amendments set forth above, and in the previous amendment, is submitted herewith for the Examiner's convenience.

In numbered paragraph 1 on page 2 of the Office Action, the amended drawings submitted with the last response are objected to on the basis that lines exist in Figures 3, 4 and 6. Accordingly, submitted herewith, on attached pages, are replacement drawings for Figures 3, 4 and 6, wherein lines between Figures have been removed. Withdrawal of the objection to the drawings is therefore requested.

In numbered paragraph 2 on page 2 of the Office Action, amendments to specification page 3, after line 20, have been objected to as introducing new matter under 35 U.S.C. §132. This rejection is respectfully traversed because all features discussed in this amendment find support in the originally filed specification,

drawings and claims. However, in an effort to address concerns raised by the Examiner, a revised amendment to specification page 3, line 20 has been introduced to reduce issues on appeal.

More particularly, the Examiner asserted that in Applicants' previous amendment to specification page 3, line 20, the references to: "a second electromagnet and a locking shackle", and "extension of the rod and positioning of the blocking plate used as an indicator", were unsupported by the originally filed specification. These assertions are inaccurate. The second electromagnet refers to electromagnet 12 of the original specification, the locking shackle refers to locking shackle 13 of the original specification, and the use of the rod system 20 and blocking plate 23 as a visible indicator is discussed at original specification page 4, lines 9-15. In the present amendment to page 6, in the second paragraph, a specific reference to the "actuator" as an electromagnet has been deleted, so that only a single electromagnet is mentioned in this paragraph. Withdrawal of the objection to the specification and entry of the foregoing amendment are therefore requested.

In numbered paragraph 3, the specification is objected to under 35 U.S.C. §112, first paragraph, as failing to "clearly describe an operable device that performs the intended interlocking method." In this portion of the Office Action, the Examiner asserts that: (1) a green indicator lamp is not shown in the figures; (2) there is no disclosure as to what would trigger such a lamp; (3) there is no suggestion as to how a mechanical arrow, generally represented in the figures as element 70, is made to indicate a selected situation; and (4) the application fails to indicate how the various parts operate or interrelate. Applicants' previous comments were characterized by the Examiner as merely paraphrasing the original specification.

The Examiner's objections to the specification as failing to comply with 35 U.S.C. §112, first paragraph, are respectfully traversed. Regarding the objection to the specification under 35 U.S.C. §112, first paragraph, an indicator lamp for indicating that interlocking of the actuator is achieved is described, for example, at specification page 3, lines 28-31. A reference numeral 19 in Figure 3 illustrates such a lamp, and this reference numeral has been added to the specification at page 3, line 29. The manner by which this lamp is triggered is clearly discussed in the original specification. The trigger, as mentioned at specification page 3, lines 28-31, is the interlocking of the actuator. A mechanical indication is also provided, as represented, for example, by the mechanical arrow 16 inside the actuator, which is clearly depicted in Figure 3.

With regard to mechanical arrow 70, this element is described, for example, on specification page 3, lines 15-16, as providing an indication of the position of contacts 30 of the breaker. Please note that the mechanical arrow described in the specification, and referenced with respect to element 70 of Figure 2, is also illustrated in Figure 1 with respect to each breaker. Those skilled in the art would appreciate that the "mechanical arrow 70" described with respect to the rod system 20 can be configured as the "mechanical arrow 16" described with respect to the actuator 10, and illustrated in greater detail in Figure 3. The mechanical arrow 70 is specifically described in the specification as indicating the positions of the contacts 30, and the positions of the contacts 30 are described as being in either an on or off condition (see, for example, specification page 3, line 26 – page 4, line 5). In addition, original specification page 4, lines 9-11, describes that the rod system 20 transitions between on and off conditions of the breaker. Thus, those skilled in the

art would appreciate that the indicator 70 would provide a mechanical indication of whether the breaker is in an on condition or an off condition.

The Examiner's assertions that the application fails to indicate how various parts of the disclosed exemplary embodiments operate or interrelate, is respectfully traversed. Applicants' specification clearly sets forth the exemplary embodiments of the present invention by which electrical and/or mechanical interlocks are provided for an actuator and associated rod system of a breaker. Indications of operating conditions of the breaker are also provided electrically and/or mechanically, and support for such features is set forth in such a manner as to enable one skilled in the art to make and use the present invention without undue experimentation.

In light of the foregoing comments, withdrawal of the objections under 35 U.S.C. §132 and 35 U.S.C. §112, first paragraph, is requested. Similarly, withdrawal of the rejection of the claims in numbered paragraph 5 of the Office Action, under 35 U.S.C. §112, first paragraph, is requested for reasons set forth above.

In numbered paragraph 6, the Examiner has objected to the order of the various dependent claims. Upon an indication the application is in condition for allowance, the dependent claims can be reordered as requested by the Examiner.

In numbered paragraph 7, claim 33 is objected to on the basis of a minor informality. By the foregoing amendments, this objection has been addressed, such that its withdrawal is requested.

In numbered paragraph 9 of the Office Action, claims 17, 28, 30, 33 and 38-39 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,477,016 (Baginski et al). This rejection is respectfully traversed, as the Baginski patent fails to teach or suggest the invention as presently set forth in independent claims 17 and 39.

Applicants' specification describes exemplary embodiments of a device and associated method for interlocking a disconnecting breaker. In the exemplary Figure 1 embodiment, a disconnecting breaker for three poles is illustrated, wherein an electrically controlled actuator 10 controls a rod system 20 which connects poles and controls the positions of breaker contacts 30. The positions of the contacts 30 of the breaker are indicated on each pole using, for example, a mechanical arrow 70. The specification describes that when the disconnecting breaker is interlocked, the actuator 10 can be interlocked electrically and/or mechanically using electromagnet 12. The rod system 20 of the breaker 30 can also be interlocked. An indication of the interlocking of the rod system 20 can similarly be provided electrically and/or mechanically.

Figure 3 shows an exemplary electromagnet 12 equipped with a mechanical locking shackle 13 and locking package 11. As described in the last paragraph on specification page 3, a first key 18 can be used to release the electromagnet 12, whereby operating current supplied to the locking package 11 is interrupted. An indication of the interlocking of the actuator 10 can be provided using a lamp 19 and/or a mechanical arrow 16 inside the actuator. An auxiliary contact 17 indicates the position of the breaker itself.

Specification page 4, with reference to Figure 4, describes that by turning the first key 18 in a second lock 22, movement of a blocking plate 23 or other blockage device is possible. The blockage plate 23 can be used to lock the rod system 20 in a desired position, and this interlocking can also be indicated electrically and/or mechanically.

Thus, exemplary embodiments as described in the specification include using a first interlock associated with a linking system, and a second interlock associated with an actuator to provide interlocking of a disconnecting breaker.

The foregoing features are broadly encompassed by each of the independent claims 17 and 39, and are neither taught nor suggested by the Baginski patent. For example, claim 17 is directed to a disconnecting breaker which comprises, among other features, an actuator, a first interlock that blocks the movement of the linking system and maintains said at least one set of breaker contacts in the open position, and a second interlock that interlocks the actuator to prevent actuator control of the breaker contacts. Claim 39 is directed to a method for interlocking a disconnecting breaker and comprises, among other features, activating an actuator, and engaging a first interlock that blocks the movement of the linking system and maintains said at least one set of breaker contacts in the open position. Such features are neither taught nor suggested by the Baginski patent.

The Baginski patent is directed to a mechanical circuit breaker having a mechanical transmission link 74 composed of a push-rod 46 with position sensor 54, and a link rod 56 associated with bar 18. Contacts 16, 22 and 24 are positioned using the mechanical transmission link 74. However, the Baginski patent does not teach or suggest first and second interlocks for interlocking an actuator and associated linking system as recited in claim 17. The locking latch 38 and the padlock 70 disclosed in the Baginski patent are used with a push-rod 46 and link rod 56, and do not cooperate with an electrically controlled actuator as are used, for example, in high voltage disconnecting circuit breakers, to maintain at least one set of breaker contacts in an open position. The Baginski patent therefore fails to teach or suggest both of the first and second interlocks recited in claim 17.

Because the Baginski patent fails to teach or suggest features of claim 17, claim 17 is allowable over the Baginski patent. Claim 39 is directed to a method which recites features similar to those discussed with respect to claim 17, and is similarly allowable over the Baginski patent.

The remaining claims rejected by the Examiner depend from the aforementioned independent claims and recite additional advantageous features which further distinguish over the Baginski patent.

Thus, independent claims 17 and 39, like independent claims 21 and 24, are allowable. All of the remaining claims depend from these independent claims and recite additional features which are further considered allowable.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice of Allowance is requested. However, should the Examiner have concerns regarding any of the above, it is requested that the undersigned be contacted at the number shown below.

Respectfully submitted,

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Date: October 25, 2004

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AMENDMENTS TO THE DRAWINGS:

Applicants submit herewith, on the attached pages, replacement drawings for Figs. 3A-3C, 4A-4B and 6A-6B.